

Appln No. 10/019,563
Amdt date July 3, 2003

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

5b
c17
1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

B¹
6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Previously added) A medical apparatus for remodeling a mitral valve annulus adjacent to the coronary sinus, comprising:

an elongate body, having a proximal end region and a distal end region, each of the proximal and distal end regions dimensioned to reside completely within the vascular system, the elongate body being movable from a first configuration for transluminal delivery to at least a portion of the coronary

sinus to a second configuration for remodeling the mitral valve annulus proximate the coronary sinus;

a forming element attached to the elongate body for manipulating the elongate body from the first transluminal configuration to the second remodeling configuration; and

a lock for retaining the elongate body in the second configuration at least in part within the coronary sinus.

12. (Previously added) The medical apparatus according to claim 11, wherein the forming element is secured to the elongate body at a point of attachment and the forming element is movable relative to the elongate body in order to adjust the elongate body within the coronary sinus between the first and second configurations.

13. (Previously added) The medical apparatus according to claim 12, wherein the forming element is adapted to be severed while the elongate body is positioned at least in part within the coronary sinus in the second configuration.

14. (Previously added) The medical apparatus according to claim 13, further comprising a cutting tool which is adapted to sever the forming element while the elongate body is positioned at least in part within the coronary sinus.

15. (Previously added) A medical apparatus as in claim 11, wherein the elongate body defines an arc when in the remodeling configuration.

16. (Previously added) A medical apparatus as in claim 11, further comprising a coating on the body.

17. (Previously added) A medical apparatus as in claim 11, wherein the apparatus is movable from the implantation configuration to the remodeling configuration in response to proximal retraction of the forming element.

18. (Previously added) A medical apparatus as in claim 11, wherein the apparatus is movable from the implantation configuration to the remodeling configuration in response to distal advancement of the forming element.

19. (Previously added) A medical apparatus as in claim 11, further comprising an anchor for retaining the apparatus at a deployment site within a vessel.

20. (Previously added) A medical apparatus as in claim 9, wherein the anchor comprises a friction enhancing surface structure for engaging the wall of the vessel.

21. (Previously added) A medical apparatus as in claim 9, wherein the anchor comprises at least one barb for piercing the wall of the vessel.

22. (Previously added) A medical apparatus for remodeling a mitral valve annulus adjacent to the coronary sinus, comprising:

an elongate body, having a proximal end region and a distal end region, each of the proximal and distal end regions dimensioned to reside completely within the vascular system, the elongate body being movable from a first configuration for transluminal delivery to at least a portion of the coronary

sinus and a second configuration for remodeling the mitral valve annulus proximate the coronary sinus;

13 a forming element attached to the elongate body for manipulating the elongate body from the first transluminal configuration to the second remodeling configuration, the forming element secured to the elongate body at a point of attachment and movable relative to the elongate body in order to adjust the elongate body within the coronary sinus between the first and second configurations, the forming element adapted to be severed while the elongate body is positioned at least in part within the coronary sinus in the second configuration; and

a cutting tool adapted to sever the forming element while the elongate body is positioned at least in part within the coronary sinus;

wherein the elongate body is interchangeably adjustable between the first and second configurations within the coronary sinus.

23. (New) A device for effecting the condition of a mitral valve annulus of a heart comprising a resilient member having a cross sectional dimension for being received within the coronary sinus of the heart and having a longitudinal dimension having an arched configuration for partially encircling the mitral valve and exerting an inward pressure on the mitral valve when within the coronary sinus adjacent the mitral valve for constricting the mitral valve annulus.

24. (New) The device of claim 23 wherein the resilient member has a distal end and a proximal end, and wherein the

distal end and proximal end define an included angle of at least 180°.

25. (New) The device of claim 23 wherein the resilient member has a distal end and a proximal end and wherein the resilient member longitudinal dimension is of a length to cause the proximal end of the resilient member to be proximal to the ostium of the coronary sinus.

26. (New) The device of claim 23 wherein the resilient member includes at least one fixation element.

27. (New) The device of claim 26 wherein the at least one fixation element is at a proximal end of the resilient member.

28. (New) The device of claim 26 wherein the at least one fixation element is a plurality of teeth formed in the resilient member.

29. (New) The device of claim 26 wherein the at least one fixation element is material mesh.

30. (New) The device of claim 23 wherein the resilient member is formed of an alloy including at least nickel and titanium.

31. (New) A mitral valve annulus constricting device comprising a generally C-shaped clip member formed of resilient material for exerting a substantially radially inward force on the mitral valve annulus when placed in the coronary sinus of a heart about and adjacent to the mitral valve.

32. (New) A mitral valve therapy system comprising:

1
B a resilient member having a cross sectional dimension for being received within the coronary sinus of a heart and having a longitudinal dimension having an arched configuration for partially encircling the mitral valve of the heart and exerting a substantially radially inward compressive force on the mitral valve annulus of the heart when placed within the coronary sinus adjacent the mitral valve, the resilient member having a proximal end including a coupling mechanism; and,

an elongated introducer formed of flexible material and having a distal end including a coupling mechanism for being releasably coupled to the resilient member coupling member for guiding the resilient member into the coronary sinus of the heart and being detached from the resilient member once the resilient member is placed within the coronary sinus to permit the introducer to be removed from the heart while leaving the resilient member positioned within the coronary sinus.

33. (New) The system of claim 32 wherein the resilient member has a distal end opposite the proximal end, and wherein the distal end and proximal end define an included angle of at least 180°.

34. (New) The system of claim 32 wherein the resilient member longitudinal dimension is of a length to cause the proximal end of the resilient member to be proximal to the ostium of the coronary sinus.

35. (New) The system of claim 32 wherein the resilient member includes at least one fixation element.

36. (New) The system of claim 35 wherein the at least one fixation element is at the proximal end of the resilient member.

37. (New) The system of claim 35 wherein the at least one fixation element is a plurality of teeth formed in the resilient member.

38. (New) The system of claim 35 wherein the at least one fixation element is material mesh.

B 39. (New) The system of claim 32 wherein the resilient member is formed of an alloy including at least nickel and titanium.

40. (New) The system of claim 32 further including an elongated cylindrical sheath dimension for receiving the resilient member and the introducer, the sheath being flexible for advancement into the coronary sinus and guiding the resilient member into the coronary sinus.

41. (New) The system of claim 40 wherein the sheath has a distal end and wherein the resilient member coupling mechanism and introducer coupling mechanism are releasable when the distal end of the sheath is proximal to the introducer coupling mechanism.

42. (New) A method of treating dilated cardiomyopathy of a heart of a patient, the method including the steps of:
providing a constriction device formed of resilient material having an unstressed C-shape configuration with an

effective radius less than a dilated mitral valve annulus radius and a cross sectional dimension for being received within the coronary sinus of the heart; and

advancing the constriction device into the coronary sinus of the heart until the constriction device at least partially encircles the mitral value of the heart.

43. (New) The method of claim 42 wherein the advancing step includes releasably coupling the constriction device to an elongated flexible introducer and moving the constriction device into the coronary sinus with the introducer.

44. (New) The method of claim 43 including the further steps of releasing the introducer from the constriction device when the constriction device at least partially encircles the mitral valve and removing the introducer from the patient.

45. (New) The method of claim 43 including the further step of placing a cylindrical sheath within the coronary sinus of the heart of the patient, the sheath having a cross sectional dimension for receiving the introducer and constriction device, and wherein the advancing step includes the step of guiding the introducer and constriction device into the coronary sinus within the sheath.

46. (New) The method of claim 45 including the further steps of releasing the introducer from the constriction device when the constriction device at least partially encircles the mitral valve and removing the introducer and sheath from the patient.

Appln No. 10/019,563
Amdt date July 3, 2003

47. (New) The method of claim 46 including the further step of retracting the sheath until the sheath is proximal to the constriction device prior to releasing the introducer from the constriction device.

B 48. (New) A mitral valve annulus constricting device comprising a generally C-shaped clip member formed of resilient material for exerting a substantially radially compressive force on the mitral valve annulus when placed adjacent to the mitral valve.